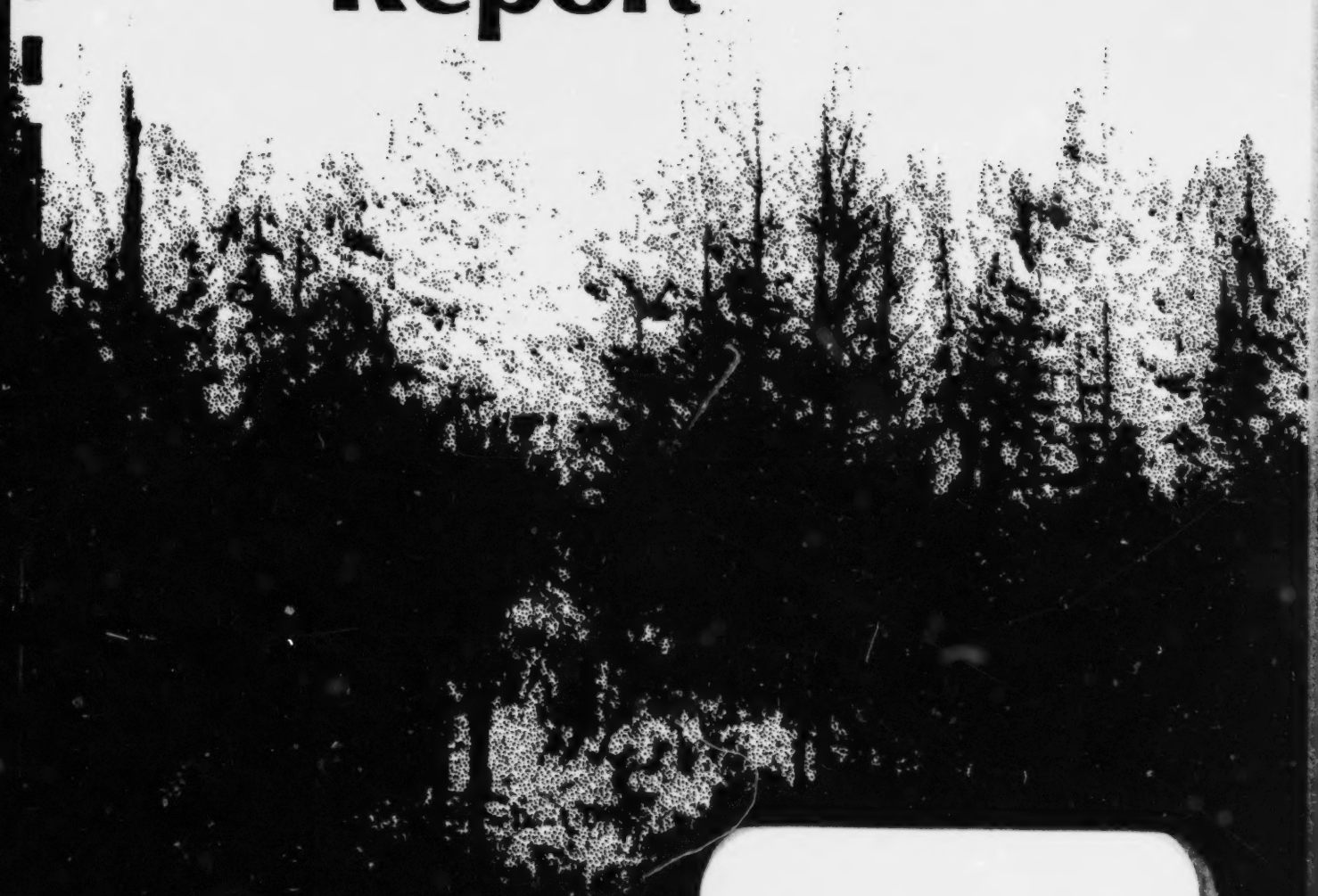
Research Report



EXTENSION OF HIGHWAY 58

TO FORT SMITH AND A

CONNECTOR TO FORT CHIPEWYAN

EXTENSION OF HIGHWAY #58 TO

FORT SMITH AND A CONNECTOR TO FORT CHIPEWYAN

Northern Development Branch

March, 1984

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Nichols Applied Management Ltd. assisted the study by conducting a literature review, completing selected interviews and analyzing the implications of road extensions in relation to the proposed Slave River Hydro Electric Project.

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EXECUTIVE SUMMARY

Purpose

- The purpose of this study is to examine all-weather road access in the extreme northeast corner of Alberta. The report reviews the perspective of various communities, the general economics and the issues of road development within Wood Buffalo National Park. The impacts of the Slave River Hydro-Electric project for road development are also examined in a preliminary fashion.

- Two roadway developments are analyzed. These are:

  - the linking of Highway #58 from Jean D'Or Prairie to the Wood Buffalo National Park Loop Road at Peace Point and upgrading the Loop Road between Peace Point and Fort Smith to all-weather status; and

  - an all-weather connection between the Park Loop Road and Fort Chipewyan.

Background

- In the past 10 years the Northern Alberta Development Council has received a total of 19 briefs from citizens and groups advocating road development in the region. Some of the briefs urge road development south from Fort Chipewyan to Fort McKay, and some have recommended the extension of Highway #58 east and north to Fort Smith.

- The construction of all-weather roads in northeastern Alberta is impeded by four significant natural barriers; Lake Athabasca, Lake Claire, the Canadian Shield and the Peace-Athabasca Delta. These

physical features combined with a small population and a modest resource base inhibit road development. However, there are also a number of social, environmental and cultural factors that require careful and sensitive consideration in roadway planning.

- o A road from Fort Smith/Fort Chipewyan south to Fort McKay through the Peace-Athabasca Delta to connect with Highway #63 has been deemed extremely costly and will not likely be built in the foreseeable future. This option is not examined in this report.

Specific Objectives

- o The specific objectives of this study are to:

  (1) Examine the general economics of two proposed road developments, Jean D'Or Prairie to Peace Point and the Park Loop Road to Fort Chipewyan.

  (2) Convey the perspectives of each community that will be affected by the proposed road extensions. The communities visited were High Level, Fort Vermilion, Garden River, Fort Chipewyan and Fort Smith, N.W.T.

  (3) Outline in a preliminary fashion the effect the proposed Slave River Hydro Electric Project will have on road development.

  (4) Examine the concerns associated with developing roads within Wood Buffalo National Park.

Major Findings and Conclusions

Community Support

- The communities of Fort Vermilion, High Level and Fort Smith strongly support the extension of Highway #58 from Jean D'Or Prairie through Wood Buffalo National Park to Fort Smith.

- Strong support in Fort Chipewyan for the "northern alternative" to the Park loop road is predicated upon the assumption that all-weather access south across Lake Athabasca to connect with Highway #63 at Fort Mackay is uneconomic and impractical in the forseeable future.

- The community of Garden River which is also currently non-accessible by an all-weather road, does not appear to support the Highway #58 extension. Residents of this native community hint that they may support road development but only when other outstanding issues are satisfactorily resolved. These issues include defining their community's status and the guarantee of hunting, fishing and trapping rights within Wood Buffalo National Park. Even with resolution of these issues, it is felt the community would want to be involved in defining how close a road came to their community.

Wood Buffalo Park

- The proposed roadway extension tends to conflict with existing park policies and objectives. In particular, the provision of a road through the park may detract from the "natural evolution of the wilderness of the park". Certainly, numerous environmental issues and concerns will have to be assessed as noted by the Reid, Crowther and Partners and in the Wood Buffalo National Park Draft Plan. In terms of wildlife, for example, protective management measures would be necessary in relation to the bison, woodland caribou, and perigrine falcon.

- o Parks Canada believes any road development west of Peace Point (i.e., to Highway #58) would not benefit the Park. Consequently, they have stated they would not cost share in the project. However, if road access was provided to Fort Chipewyan on the east side of the Slave River, Parks Canada would cost share in a road linking the existing park loop road to the River.

Slave River Hydro Electric Project

- o In the context of the Slave River Hydro Electric Project, it is estimated that the proposed Highway #58 extension would generate the following direct savings.

  i) reduced transport costs for materials and equipment totalling $4.3 to $6.3 million; if goods were transported via the Mac-Kenzie Highway at High Level.

  ii) reduced transport costs for passenger vehicles totalling $0.1 to $0.2 million.

- o To the extent that Highway #67 from Slave Lake to Fort Vermilion is further upgraded, the benefits to the Slave River Project of using the Highway #58 route versus Highway #5 in the N.W.T. could increase by a further $3 million.

- o The Fort Chipewyan connector could provide savings to the Slave River Project of as much as $3.5 million, in terms of avoidable road construction, if the transmission line were to follow the alignment of the connector.

Economic Development

- Currently the region is typified by a resource base that by itself does not economically justify extensive road development. The Canadian Shield, Lake Athabasca and Lake Claire and the Peace-Athabasca Delta are natural barriers that make road development expensive and difficult.

- Residents in many of the communities surveyed cited economic development opportunities that may accompany the proposed road extension. Many residents indicated that tourism would increase. In High Level, Fort Vermilion and Fort Smith, increased tourism was a frequently mentioned expectation as the result of the creation of a "circle tour" with Highway #5 in the Northwest Territories. In Fort Chipewyan tourism was expected to increase simply by virtue of road access to the outside world. While increased tourism would assist a number of small businesses in the accommodation, services and guiding area, it was not seen as a "major boom" to the region.

- In Fort Chipewyan, residents indicated that a road may improve the development prospects for lumber, mineral and fishing resources in the area. Each of these resources face other impediments that all-weather access alone will not resolve; however, the proposed road may assist in long term development.

- Overall, the traditional occupations of hunting, fishing and trapping will not be seriously affected by the development of roads within the region.

Freight Costs to Fort Chipewyan

- o A significant issue at the time of writing this report was the uncertainty associated with barge service to the community of Fort Chipewyan. Northern Transportation Company Limited (NTCL) had indicated its intention to abandon its Fort McMurray terminal on the Athabasca River . One proposal suggested by the Company was to serve the community from Fort Fitzgerald near Fort Smith. Residents were concerned that this would double their freight costs for goods.

- o The Water Transport Committee of the Canadian Transport Commission held a public hearing in Fort McMurray in January 1984. The primary purpose of the hearing was to review applications for licences to operate barge services on the Athabasca River. The outcome of these hearings was a successful application by A-Frame Construction Limited as the only common carrier on the route. Pine Creek Construction and Norsask Marine were also licensed to operate limited and unscheduled barge services. A major element of the A-Frame proposal was a 50% increase in freight rates, created in part by a high debt load.

- o Road access would provide a trucking alternative to the present barge or air freight services available.

Social Considerations

- o Possible negative effects of road development on the social and cultural fabric of the isolated communities, would include the potential for increased alcoholism, some disruption of hunting and trapping areas, and over time, the loss of traditional native and local lifestyles. These impacts may occur during both the construction and operating phases of the road projects.

- Positive social effects of the road would be first-time access, or an alternate travel route, to southern communities; allowing residents the mobility normally found in other regions. Unemployed residents would be provided enhanced access to job markets. The project would also improve community access to a wide range of public services, including health, education and social services.

Conclusions

- This review indicates that the extension of Highway #58 to Fort Smith and a connection to Fort Chipewyan is strongly supported by the majority of residents in the region.

- With the exception of Garden River residents, communities in the region expect to benefit from increased economic activity and by virtue of de-isolation and easier access to the south.

- An increase in tourism in the region is anticipated as a result of the creation of a "circle tour" and improved access to Wood Buffalo National Park.

- With the uncertainty of barge tariff, Fort Chipewyan residents are very concerned about the high cost of freight to their community.

- The proposed road developments would have a beneficial impact on the proposed Slave River Hydro-Electric Project.

- If the Highway #58 extension was to be built, the concerns of Garden River regarding the status of the community, their hunting, fishing and trapping rights, and the route of the road near their community should be resolved.

- Overall, the traditional occupations of hunting, fishing and trapping will not be seriously affected by the development of roads within the region.

- The first step in initiating the proposed road project would involve discussions between the Alberta Government, the Government of the Northwest Territories and the Federal Government.

MAIN REPORT

1. INTRODUCTION

1.1. Background

- According to its governing act, the Northern Alberta Development Council functions to "investigate, monitor, evaluate, plan and promote practical measures to foster and advance general development in northen Alberta". The Council holds regular public meetings across the north and solicits the views of northerners through the receipt of briefs on topics of concern to residents. See Figure 1 for a map of the Northern Alberta Development Council area.

- In its role as an advisory body to the Provincial Cabinet, the NADC has strongly reflected the view of northern communities that all-weather roads are an essential element of economic and social development. Generally, road systems in northern Alberta have been developed in response to community access needs and resource development potential. While significant progress has been noted during the past ten years, there are still some gaps in the road system in northern Alberta; particularly in the area of east-west connectors and access to four or five remaining isolated communities.

- Since its re-organization in 1973, the Council has received over 1100 briefs. Of this total, approximately 22% have concerned transportation issues. All-weather road access for Fort Chipewyan and area communities through an extension of Highway #58 into Wood Buffalo National Park or by proceeding south to Fort McMurray has been the specific topic brought to Council's attention in 19 separate briefs.

- In June, 1983 the Northern Alberta Development Council (NADC) received a brief from the Fort Chipewyan Advisory Council of Improvement District #18 requesting that the NADC investigate the possibility of extending Highway #58 from Jean D'Or Prairie to Peace Point

FIGURE 1

NORTHERN ALBERTA DEVELOPMENT COUNCIL AREA

COMMUNITIES WITH POPULATION OVER 750 (1981 CANADA CENSUS)

Produced by the Alberta Bureau of Surveying and Mapping © 1983

in Wood Buffalo National Park, and connecting Fort Chipewyan with an all-weather road. A similar brief for development of Highway #58 was also received from Fort Smith, N.W.T. The NADC directed its support staff, the Northern Development Branch, to prepare a report outlining both the economics of the proposal and the viewpoints of the communities along the proposed route.

- The extreme northeast corner of the Province has several natural barriers -- Lake Athabasca, Lake Claire, the Canadian Shield and the Peace Athabasca Delta. These physical impediments combined with a low regional population and a modest resource base inhibit the development of all-weather roads. Despite these difficulties residents of the region continue to voice the need for improved access.

- Other factors requiring careful consideration are the social, environmental and cultural impacts associated with road development. While the majority of people do not feel there would be serious negative impacts, some groups do have concerns. Consequently, all-weather roads in the northeast corner of the province require careful and sensitive planning.

1.2 Purpose and Scope of the Report

- The purpose of this report is to provide the NADC with an up-to-date situation report on the need for road development in northeastern Alberta. This report will:

  (1) examine the general economics of proposed road developments,

  (2) convey the perspectives of each community that will be affected by the proposed road,

(3) outline in a preliminary fashion the possible affect of the proposed Slave River Hydro-Electric Project on proposed road development, and

(4) examine the concerns associated with developing roads within Wood Buffalo National Park.

- This document reviews specifically two inter-related road projects which would improve access to the Fort Smith, Wood Buffalo National Park and Fort Chipewyan areas:

(1) The proposed extension of Highway #58 in an easterly direction to join with an existing loop road near Peace Point in Wood Buffalo National Park. Highway #58 currently extends from High Level on the MacKenzie Highway (#35) as far east as Jean D'Or Prairie. The Park loop road currently provides all-weather access to Fort Smith, and winter access to Fort Chipewyan.

(2) The proposed construction of an all-weather connector road to Fort Chipewyan from the Wood Buffalo National Park Loop Road.

1.3 Study Approach

- This report was prepared by the Northern Development Branch of the Alberta Tourism and Small Business. The consulting firm, Nichols Applied Management Ltd., assisted by conducting a literature review, preparing a background summary, and carrying out selected interviews concerning the proposed Slave River Hydro Electric Project.

- In late 1983, the Northern Development Branch staff visited the communities of High Level, Fort Vermilion, Garden River, Fort Smith, and Fort Chipewyan. Interviews and meetings were held in each community to assess overall community reaction to the proposed road developments and to identify the specific community issues, problems and opportunities (See Section 8.2 for a list of community contacts). A total of some 95 people were interviewed or contacted.

- The concerns and opinions presented in this report should not be viewed as static or complete. The actual estimated costs of road development from Fort Chipewyan to Peace Point, the long-term status of the Garden River community, and the feasibility of the proposed Slave River Hydro-Electric Project are all uncertainties which were not resolved at the time this report was prepared.

2. DESCRIPTION OF PROJECT

2.1 Jean D'Or Prairie to Peace Point Highway #58

This part of the proposed project would extend Highway #58 from Jean D'Or Prairie to the Wood Buffalo National Park Loop Road at Peace Point. The extension would provide a new all-weather road access to Fort Smith. The length of the roadway extension from Jean D'Or Prairie to Peace Point is estimated to be 186 km. Approximately 116 km would be within the National Park and, consequently, actual development of the extension will be controlled by both the Federal and Provincial Governments.

- The main features of the extended roadway would include:

  (1) Improved access to Wood Buffalo National Park;

  (2) Improved access to a number of isolated communities, including Fox Lake and Garden River Indian Reserve;

  (3) Reduced road distance from Fort Smith to Edmonton. The present road distance from Edmonton to Fort Smith, via NWT Highway #5, is 1371 km and the reduction would be 319 km via Highway #67 or 157 km via Highway #35, a saving of 10% - 20%;

  (4) Fort Chipewyan would still remain unserved by an all-weather access road; however through an existing winter road it would experience improved access to the rest of Alberta for part of the year.

- The possible alignment of a road extension to Highway #58 is shown in Figure 2.

- Total road construction costs for the 186 km road extension joining Peace Point and Jean D'Or Prairie have been estimated by Reid,

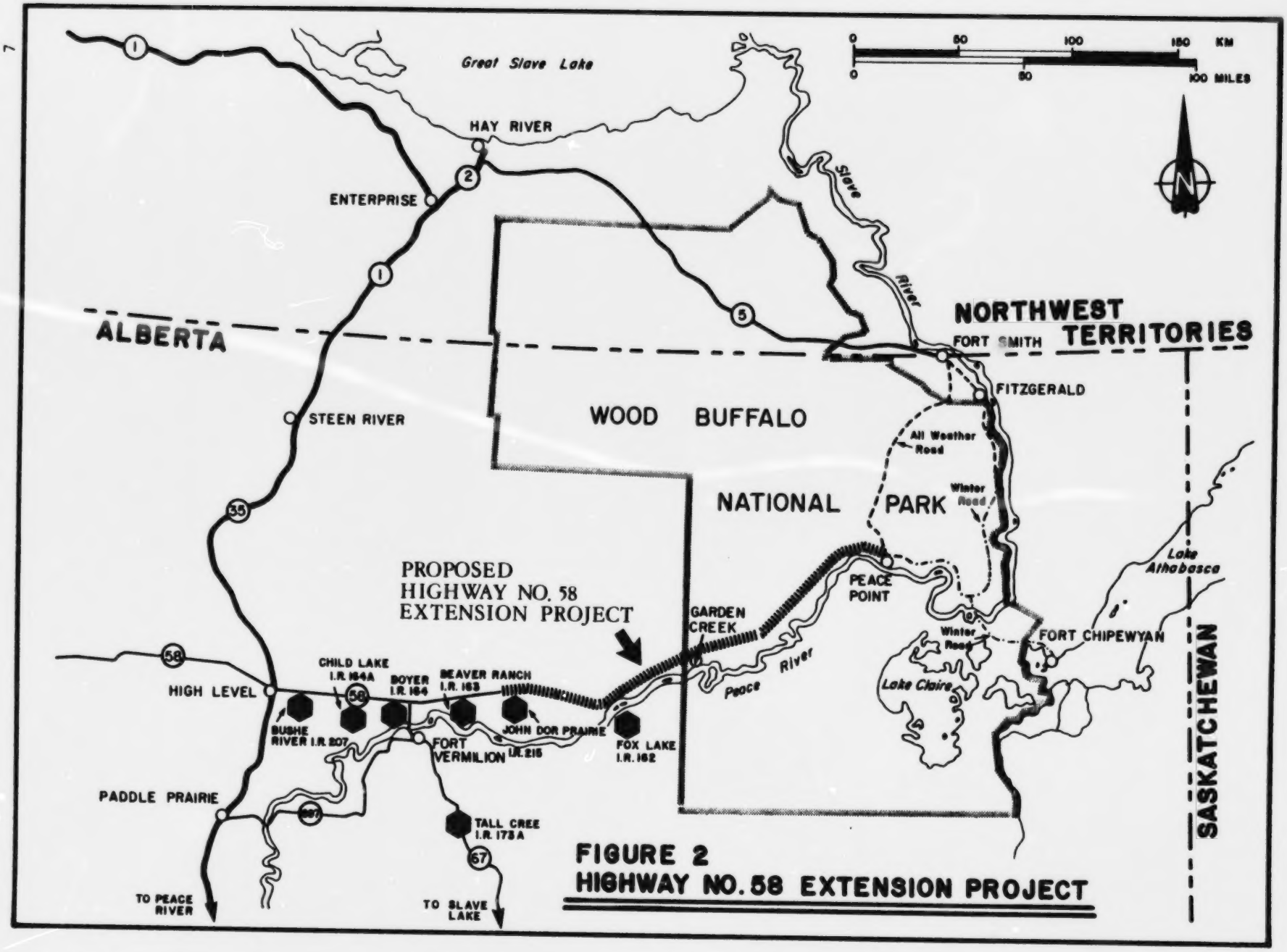

FIGURE 2
HIGHWAY NO. 58 EXTENSION PROJECT

Crowther & Partners at $24.7 million (unit costs per kilometer in 1981 dollars). The construction costs within the park boundaries are expected to account for roughly 63% of the total costs. Improvements to the existing loop road from Peace Point to Fort Smith would total an additional $10.35 million. The draft management plan for Wood Buffalo National Park provides for improvements to the Park Loop Road. Parks Canada, however, is not prepared to participate financially in the construction or maintenance of the roadway from the western park boundary to Peace Point. They do concede, however, that the road is important to the region.

- An important assumption is that aggregates will be available within an average 25-kilometer haul distance. Alberta Transportation has indicated that the estimate may be low and a thorough review is required to confirm gravel supplies.

- Although maintenance costs are highly dependent on hauling distances for gravel supplies the annual maintenance costs for the proposed road from Jean D'Or Prairie to Peace Point have been estimated at $900,000.

2.2 Park Loop Road to Fort Chipewyan

- This proposal would see Fort Chipewyan linked to the Park Loop Road and thus connected with the proposed Highway #58 extension linking Peace Point and Jean D'Or Prairie. At the present time, a winter access road links Fort Chipewyan to the Park Loop Road for four months each year. A map of the existing road network is provided in Figure 2. The community is also served by regular air service three days per week. An existing barge service from Fort McMurray also provides summer access; however, the present operator, Northern Transportation Company Limited (NTCL), indicated their intention to discontinue the service in October 1983.

- Two options have been proposed for connecting Fort Chipewyan to the Park Loop Road. Alberta Transportation is currently undertaking preliminary studies but the general alignment and project costs are not known at this time.

- One option proposed in the Wood Buffalo National Park Draft Plan is shown in Figure 3. This option would involve the construction of a road north of the community on the east side of the Slave River then west to the existing Park Loop Road. The length of the new road alignment (community to Park Loop) is about 50 km. The construction of this road would involve construction on the Canadian Shield and a bridge or ferry service across the Slave River. Residents of Fort Chipewyan claim that a potential crossing with good approaches and a narrow channel exists at a point near the 30th baseline.

- Another alignment option is to follow the existing winter road. This alignment may not be favourable because it requires construction of bridges over the Slave, Quartre Fourches and Peace Rivers. The Wood Buffalo Park Draft Plan does not support this alternative.

- Either alternative would link with the Park Loop Road and all-weather access would be provided via Peace Point to both Fort Smith and Jean D'Or Prairie. The main features of the roadway would include all-weather access to Fort Chipewyan and a reduced road distance of 560 km from Fort Chipewyan to Edmonton via Highway #67.

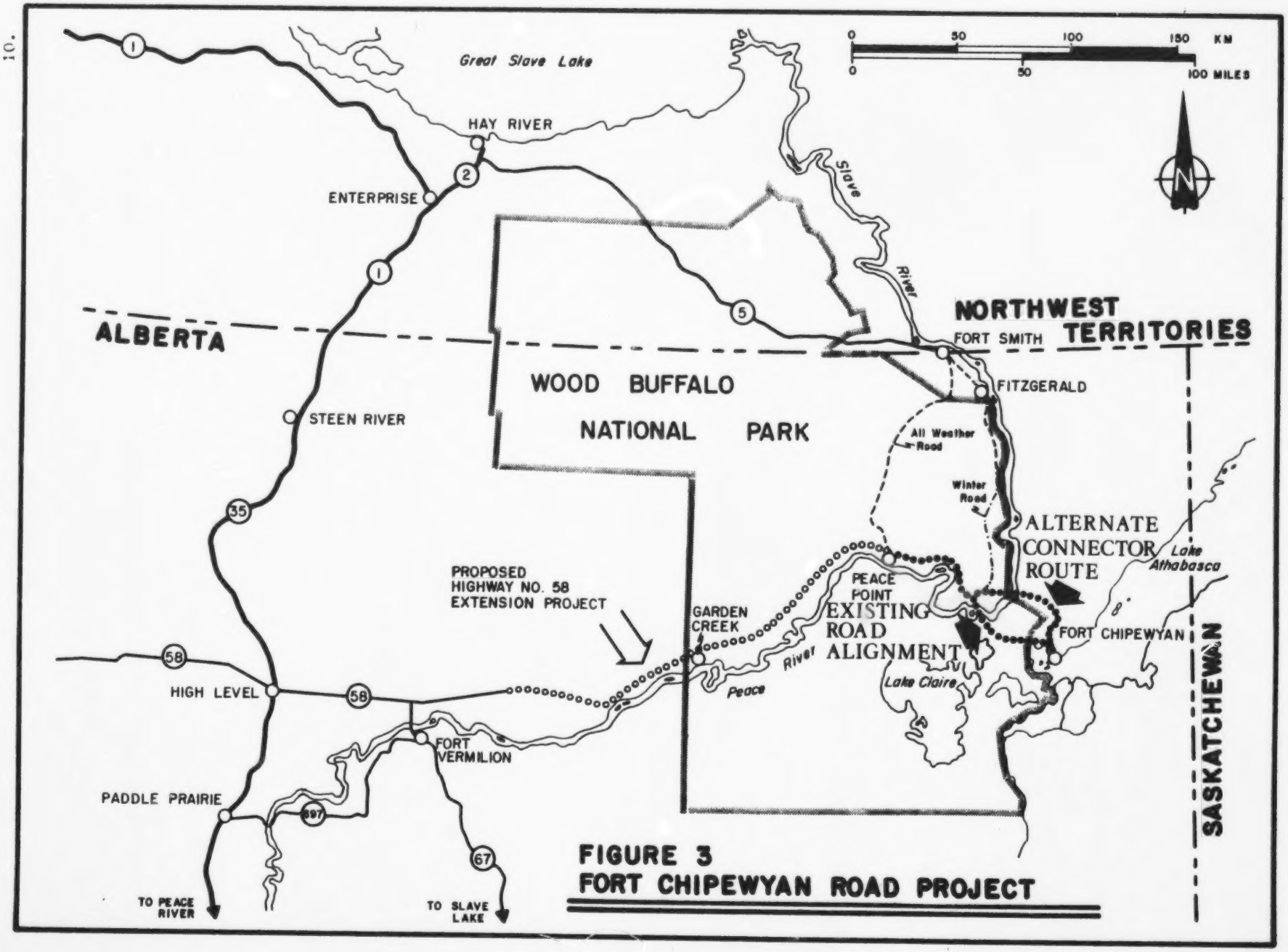

FIGURE 3
FORT CHIPEWYAN ROAD PROJECT

3. COMMUNITY VIEWPOINTS

3.1 TOWN OF HIGH LEVEL

3.1.1 Overview

- The Town of High Level is located 738 km northwest of Edmonton at the junction of the Mackenzie Highway #35 and Highway #58. Its population in 1983 was 2,673.

- In the early 1950's several stores were built at the site to serve traffic along the Mackenzie Highway and the developing rural area. In 1963 the Great Slave Railway was extended through the community and the construction of elevator facilities at High Level contributed to a large increase in agricultural activity.

- One of the major employers in High Level is Canadian Forest Products (Canfor). Canfor accounts for 90% of the lumber production in the region. The company employs about 150 full-time staff and an additional 190 seasonal employees. In addition to forest products and agriculture, High Level also supports a significant oil and gas industry.

3.1.2 Interview Results

- There appears to be general community support in High Level for extending Highway #58 to Fort Smith. Overall, the road was seen as a benefit for the region and a generator of more traffic through the community. The specific benefits are seen as:

  (1) The shorter route from Fort Smith may create additional road traffic and business for the retail service sector.

(2) Some of this road traffic may use the gravel Highway #67 (Fort Vermilion to Slave Lake) but generally respondents indicated that High Level on paved access would benefit from completion of the road extension.

(3) Another benefit mentioned was increased tourism opportunities. Respondents indicated that completion of the road would create a "circle tour" from High Level to Fort Smith to Hay River and return. This tour would benefit all communities along the route. Increased access to Wood Buffalo Park as a tourist attraction was mentioned frequently.

(4) Some residents thought that the Canfor Mill would stand to benefit from the proposed road. Canfor currently operates a lumber road generally along the alignment of the proposed route. If the road were to become a public highway then residents expect that Canfor's road maintenance costs would decrease as would the difficulties associated with unauthorized use of the licence of occupation portions of the road. Approximately one-third of High Level's employment base is related to Canfor's lumber operation. The resolution of these difficulties was seen as desireable.

(5) The road may also improve ability of residents from High Level to take advantage of contract and employment opportunities if the proposed Slave River Hydro Project went ahead.

(6) Other more specific suggestions for business opportunities or services that might be enhanced include:

- food stores, gas stations, restaurants;
- specialized services; e.g., sporting goods, bottle depot, fire fighting supply centre, etc.

- Parks Canada received some criticism for not actively encouraging tourism in Wood Buffalo National Park and for failing to report the outcomes of the draft Park Management Plan to High Level residents.

- Some social and health agencies in High Level who serve Garden River indicated that there would be a cost saving in terms of air charter costs. In addition, it was felt that there would be some improvement to emergency medical service to Garden River if the road was built.

- A concern was expressed regarding the potential for traffic accidents between passenger vehicles and logging trucks.

3.1.3 Canadian Forest Products Ltd. (Canfor)

- Canfor currently operates a winter and dry weather logging road from Jean D'Or Prairie to their timber berth inside the Park. Under the terms of the licence, the company is responsible for maintenance and operation of the road.

- Canfor generally supports the construction of an all-weather road to Fort Smith. Their major reason is that the 95 km section between Jean D'Or Prairie and Garden River would then become a public road and Canfor would no longer be required to maintain it as a logging road.

- Canfor estimates that approximately $70,000 annually is spent on maintenance of the logging road. The single largest portion of this expenditure is for maintenance of the bridge over the Wentzel River. The bridge is a 120 foot two-span log stringer type. It is not capable of taking heavy loads before freeze-up. In the winter the company installs additional pony trusses on the river ice to support heavy loads of logs. The company indicates that

the bridge cribbing and abutment supports are deteriorating and they expect to replace the bridge after the 1983-84 logging season.

- Canfor operates timber berth #408 inside Wood Buffalo Park. Expiring in the year 2002, this lease allows Canfor to cut a maximum of 400,000 cubic metres of timber annually within the Park. While the proposed road would save Canfor money, the company admits that it would not have a significant bearing on the lumbering operation itself because of the distance between the berth and the mill. As well, the company would not likely cut timber in the summer because the size of allowable loads on highways decreases substantially at this time.

- The existing logging road has been used by Canfor and its predecessor for approximately 20 years. Generally the company reports there has been little problem with light local vehicle traffic. However, this situation is changing somewhat as more large loads of building materials for Garden River are transported over the road.

- Canfor is currently negotiating with Alberta Transportation over the construction of a new bridge over the Wentzel River. To assist them in these negotiations, Canfor have asked for the support of the Little Red River Band. This band, representing the communities of Jean D'Or Prairie, Fox Lake and Garden River, passed a Band Council Resolution in support of the construction of a new bridge.

- Another concern of the company is the potential for liability lawsuits brought by the users of the present logging road against Canfor. The company's awareness of this problem has been heightened recently as a result of a successful lawsuit involving nearly $900,000 brought against Canfor after a vehicle and driver were

involved in an accident at a washed-out bridge in the Grande Prairie region.

- Company representatives were of the opinion that if the proposed road extension could not be shown to be economic as a major highway, then the Province should reduce usual highway and bridge standards (e.g., use single lane bridges). This would be realistic in the region and would reduce capital costs significantly.

3.2 FORT VERMILION

3.2.1 Overview

- The hamlet of Fort Vermilion is located 80 km east of High Level via Highway #58, which is paved to the Fort Vermilion corner. The community is the northern terminus of Highway #67 linking the hamlet with the town of Slave Lake located 400 km south. In 1983 the population of Fort Vermilion was 960.

- Fort Vermilion is one of the oldest communities in Alberta beginning in the 1790's as a fur trading post. Today the community is a small service centre for the surrounding agricultural area. In addition to commercial and agriculturally-related enterprises, Fort Vermilion has a number of administrative services including police, schools and medical facilities.

3.2.2 Interview Results

- Generally, Fort Vermilion expects to benefit from the proposed road development. The viewpoint of the respondents in Fort Vermilion was that the community would benefit primarily through the commerce generated from traffic travelling from Fort Smith to Edmonton via Highway #67. A small amount of additional tourist activity might also benefit the community.

- One respondent indicated the proposed road would create new markets in Fort Smith and Fort Chipewyan. These markets could provide an outlet for locally produced eggs, meat and vegetables.

- Most respondents in Fort Vermilion expressed the view that the wishes of the Garden River residents should be taken into consideration. Some suggested that the road should bypass Garden River if the community wished to remain isolated.

- Parks Canada's approach to development was generally perceived to be an obstacle to further road development in the Park.

3.3 GARDEN RIVER

3.3.1 Overview

- Garden River, also known as Garden Creek, is a unincorporated settlement 12 km inside the western boundary of Wood Buffalo National Park. The residents are members of the Little Red River Band. Other members of the Band live on the nearby Fox Lake and Jean D'Or Prairie Reserves. Approximately 250 members of the total Band population live at Garden River.

- Present ground access is via a winter and dry-weather road operated by Canfor Ltd., which is 75 km from the present terminus of Highway #58 at Jean D'or Prairie near the community. Alternatively, access to the community is by air to a small turf strip or by river (from the Park side mainly).

- Community facilities include a church, school, Band office, and laundromat. The school enrollment in 1982 was 39. The primary occupations are hunting, fishing and trapping.

- Garden River, Fox Lake and Jean D'Or Prairie are generally characterized by low levels of employment, lack of employment opportunities, and household income levels estimated to be roughly 45% below Alberta averages. Employment is seasonal in these communities and largely associated with hunting and trapping.

3.3.2 Interview Results

- A meeting was held in Garden River with 11 community residents. The Chief of the Little Red River Band, the Band Manager and one other Council member were also present. At the meeting the local residents stated that they were not prepared to discuss the specific proposed road development in any great detail. Their approach was rather to outline two over-riding community concerns and express a desire for negotiations with government "political leaders". They stated once their concerns were addressed, they would possibly be prepared to discuss a road.

3.3.2.1 Community Status

- The first concern of the residents pertained to the status of their community. They reported that, despite many efforts and many meetings, they are still uncertain about the legal status of their community. Their first choice was to be formally designated as an Indian Reserve within the Park. A secondary option that might be acceptable would be a 99 year lease of several townships of land, also within the Park boundaries.

3.3.3.2 Fishing, Hunting and Trapping

- The second problem outlined was the issue of fishing, hunting and trapping rights. Residents feared that as the Park was used more frequently, tourists and environmental groups would lobby for the extinction of their hunting, fishing and trapping rights.

- The key rationale behind these arguments was that they have lived at Garden River and hunted, trapped and fished within the Park for many years, long before the Park was established in 1967. They have previously been unsuccessful in obtaining firm commitments regarding their community's status from the Federal and Provincial governments.

3.3.2.3 Effects of Proposed Road

- During the course of the meeting, the residents did indicate that in general, they felt a road would not bring any particular benefits to the community. In fact, they felt there would be the following negative impacts.

  (1) The primary disbenefit would be disturbance of their culture and simple way of life.

  (2) A second particular impact pertained to a feared increase in "bootlegging".

3.3.2.4 Community Position

- The community's position appears to be that they wish to see some action on the two issues of community status and hunting rights before they consider giving an access road their blessing. At the same time, they indicated that they may not be prepared to endorse a road near their community even if these issues are resolved.

- The position of the Garden River community and the Little Red River Band is not entirely clear; however, the Band Council has passed a resolution supporting Canfor in its efforts to convince Alberta Transportation to help construct a bridge over the Wentzel River on the Canfor lease of occupation road. The Band also presented a brief to the Northern Alberta Development Council in 1981 requesting that Highway #58 be continued up to the boundary of Wood Buffalo Park.

  Consequently, it appears that the current position of the Band is that no further development of Highway #58 should go forward until the concerns of their members at Garden River have been addressed. To assist in this regard, the Band Council has requested assistance in setting up a meeting with the Federal Minister of Indian and Northern Affairs.

3.4 FORT SMITH

3.4.1 Overview

- Fort Smith with a population of 2,298, is located on the west side of the Slave River, just north of the border between Alberta and the Northwest Territories. It is connected by Highway #5 to Hay River; a distance of 280 km. The present distance between Fort Smith and Edmonton via Highway #5 and Highway #35 is 1371 km.

- Fort Smith is located below the last set of rapids on the Slave River. It's early history was closely connected to the fur trade and river traffic on the Slave. Goods would be unloaded at Fort Fitzgerald upstream and transported overland to Fort Smith where they would be reloaded to continue their journey into the Territories.

- In 1911 Fort Smith became the main administrative centre for government in the Northwest Territories. In 1921 the first government administration building was built and staffed. This role of administrative headquarters increased steadily until 1967 when Yellowknife was designated the Territorial capital and Fort Smith was reduced to a regional administrative centre.

- With the completion of the Mackenzie Highway and the rail link at Hay River in 1964, the importance of Fort Smith as a transportation link declined dramatically.

- Fort Smith is presently the center for one of the four administrative regions of the Northwest Territories. Government provides the main source of employment in the town, providing roughly 48 percent of direct employment in the community. Fur trapping, small retail and service industries, a hospital, and an adult vocational training centre represent other major sources of employment.

- There are also a number of tourism related services located in Fort Smith because of close proximity of the community to Wood Buffalo Park. However, while the economic structure of Fort Smith is considered more diversified than other communities in the region, the community is still largely dependent upon government services.

3.4.2 Interview Results

- A high degree of support for the construction of an all-weather access via Highway #58 was evident in Fort Smith. A series of community meetings and interviews with residents were held in October, 1983.

3.4.2.1 Perceived Benefits

- Personal travel and general ease of access was the most often mentioned benefit. Many respondents indicated that a primary benefit would be created by the shortened route to the Alberta communities of High Level, Peace River and Edmonton. Many respondents indicated that they drive to Edmonton between two and four times each year. Some averaged a trip "south" every three weeks (14-16 times a year).

- Substantial freight savings and a subsequent reduction in the cost of goods was seen as another large benefit of the road. A Chamber of Commerce representative estimated that freight costs for goods hauled from Edmonton might be reduced by 30% if the proposed road were paved, and by 10-20 percent if the road was gravel.

- An additional theme noted by those interviewed was the potential for increased tourism. They indicated that a circle tour through High Level, Fort Smith, Hay River, and return would benefit the community.

- It was reported that the several community residents who were examining the potential for establishing tourist related businesses, were more likely to go ahead if a road were completed.

- Fort Smith also saw increased business through access to Fort Chipewyan. Currently a number of Fort Chipewyan residents shop in Fort Smith and it was anticipated that this activity would increase.

- Some residents believed that all-weather access might cut down the cost for fire fighting in Wood Buffalo National Park.

- All people contacted strongly felt there must be a road connecting to Highway #58 if the Slave River Dam was to proceed. A number of residents argued that if this project proceeded without the proposed road, significant deterioration would occur on N.W.T. Highway #5. The damage would be caused by the high volumes of freight and traffic movement required during the construction phase of the Slave River project.

3.4.2.2 Negative Effects

- Generally, respondents did not list any negative factors associated with the road. One respondent, however, supported the road only if it were limited to passenger vehicle traffic.

- Residents felt that there may be some disruption to traplines within the Park if the road went ahead. However, they also felt those costs would be offset by improved access to the traplines.

3.4.2.3 Support for the Road

- The Town Council, Chamber of Commerce, Metis Association and Better Roads Down North Association have all been lobbying for the road. These activities have included research and preparation of briefs, presentation and submission of proposals, lobbying officials, and even trips via snowmobile to Fort Vermilion to promote the road extension.

- Thebacha College, the major vocational training facility for the Territories, is located in Fort Smith. Several groups in Fort Smith believed that the college's heavy equipment training program would be able to take part in constructing part of the road. They believed that this would have the additional spin-off benefits of training heavy equipment operators. Apparently this division of the College has successfully completed several road projects in the past.

- In January 1984, the Town Council of Fort Smith passed a motion indicating that they intended to oppose the issuance of permits for the Slave Lake Hydro Electric Project until an agreement was reached betweeen the Town and the Alberta Government on a series of issues. One of the key issues out lined by the Town was discussions with the Alberta Government regarding a road to Fort Vermilion (the Highway #58 extension).

3.4.2.4 Parks Canada

- Respondents expressed a good deal of frustration with the approach taken by Parks Canada to a Highway #58 road extension. They believe that the officials governing the Park simply do not want the road built. Moreover, they felt that Park officials have little interest in promoting tourism within the Park. The interviewees indicated that relationship between Park employees and community members was extremely poor. Several described confrontations between Park employees and community members with regard to overzealous enforcement of Park regulations. Thus, most residents interviewed saw the Park more as an obstacle to improved tourism and economic development in the area, than an asset.

- The recent completion of the Draft Wood Buffalo Management Plan, was seen as only a modest improvement in Parks Policy. Fort Smith respondents claim that the Plan and Parks policy prohibits them from acting as the proponent for the road. They feel they are also being blocked from making incremental improvements to the road; (i.e., the development of a winter road to the western boundary).

- Respondents believed that the road may create some additional pressure on the Park officials because of increased poaching. However, they suggested this problem could be mitigated by the establishment of a Park Ranger Station at the western entrance of the Park where firearms could be sealed. They felt the Park should be treated like all other major Canadian national parks -- with people access.

3.4.2.5 Garden River

- People interviewed in Fort Smith were concerned about Garden River residents and their opposition to the road development. While they generally believed that the concerns of Garden River should be addressed, some respondents also recommended that the road should by-pass the settlement by a sufficient distance if Garden River was worried about the impact of the road.

- Several respondents had visited Garden River in the past to seek their support for the road but the results of these meetings had been similarly inconclusive.

3.5 PEACE POINT

3.5.1 Overview

- The Peace Point settlement is located at the southwestern tip of the Park loop road in Wood Buffalo Park. Approximately 10 families from the Fort Chipewyan Cree Band live at Peace Point.

- The residents are involved in hunting and trapping, and some work outside the community. Because of an outstanding Treaty #8 land entitlement, the Fort Chipewyan Cree Band is currently negotiating the permanent status of Peace Point settlement with the Department of Indian and Northern Affairs.

3.5.2 Interview Results

- Discussions were held with two residents of the Peace Point community, both of whom generally supported the road proposal. They suggested that the road may provide some economic benefits to the Peace Point settlement. Opportunities to locate a gas station or restaurant might be available. These residents did not believe that the road would create any lasting harm to traplines.

- They concluded that Garden River residents may oppose the road for lifestyle and cultural reasons and recommended that their concerns be considered in the planning for any future road.

3.6 FORT CHIPEWYAN

Overview

- Fort Chipewyan is the largest community in Alberta without all-weather road access. Located on the northwestern tip of Lake Athabasca, its population in 1982 was 1,176.

- It is the oldest continuously settled community in Alberta, being established as a fur trading post in 1778 on the south shore of Lake Athabasca by Roderick MacKenzie of the Northwest Company. In 1803, Fort Chipewyan was moved to its present site. The community became a hub for both fur trading and arctic exploration activities. As the fur trade declined and other transportation routes became more important, the importance of Fort Chipewyan as a regional centre was reduced dramatically.

- The hamlet itself is made up of two Indian Bands and a sizeable Metis and white population. The Cree Band has a membership of 985 of which approximately 650 members live in Fort Chipewyan. The Chipewyan Indian Band has a membership of 312 and approximately one-half the members reside in Fort Chipewyan.

3.6.1.1 Economic Base

- Fort Chipewyan has a weak economic base, relying on fishing, trapping and some outside employment. The Delta Native Fishermen's Association report active membership of 32 fishermen. The fishermen have not fished in the past two years due to an oil spill at the Suncor plant into the Athabasca River and Lake Athabasca. The spill gave the fish a distinct oily taste and rendered them unedible for commercial purposes. In 1983 low prices combined with a continuing pollution problem made the fish unmarketable.

Consequently, fishing for 1984 continues to face an uncertain future.

- Transporting the commercial fish to market is a sizeable problem for the Fort Chipewyan fishermen. They have negotiated a $0.25 per/lb. subsidy with the Alberta Government and the fish are flown to Hay River, N.W.T. for processing. The limit for pickerel out of Lake Athabasca is set at 175,000 lbs. annually, but only 100,000 lbs. on average are caught. The allowable catch for pike and whitefish from Lake Athabasca exceeds one million lbs., but commercial fishing for these species is negligible.

- Approximately 200 permits are issued for Fort Chipewyan residents for trapping inside the Park. Of this number, it is estimated that 125 are active. In addition, approximately 75 permits are issued for trapping outside the Park. Local trappers report that trapping has been very poor during the past two seasons as a result of low water levels, small muskrat populations and forest fires.

- Syncrude Canada employs ten residents full-time and 24 part-time, on a work rotation program at its oil sands plant in Fort McMurray. Air transportation to the plant from Fort Chipewyan is provided.

- Other elements of Fort Chipewyan's economy include government employment and small retail service and construction sectors. The community's economy depends very heavily on transfer payments in the form of public assistance, Alberta Opportunity Corps funding and job creation programs.

3.6.1.2 Barge Service to Fort Chipewyan

- Alberta Economic Development estimates that 77% (3960 tonnes) of all goods for Fort Chipewyan arrived by barge in 1983. This compares with 16% (799 tonnes) by winter road and 7% (355 tonnes) by air. The total freight received in Fort Chipewyan is 5114 tonnes, of which 55% is fuel.

- Northern Transportation Company Limited (NTCL) has indicated that it will close its Fort McMurray terminal after the 1983 season. This action is primarily due to the closure of uranium mining operations at Uranium City in northern Saskatchewan. It is forecasted that freight to Uranium City will decline from 33,247 tonnes in 1981 to 2852 tonnes in 1983.

- The Water Transport Committee of the Canadian Transport Commission held public hearings in Fort McMurray in January, 1984. The primary purpose of these hearings was to listen to four proposals to operate barge services on the Athabasca River and Lake Athabasca. A-Frame Construction Limited was awarded a licence to be the new common carrier on the route. Pine Creek Construction and Norsask Marine were also licenced to operate limited and unscheduled barge service. A major element of the successful proposal by A-Frame was a 50% increase in freight rates over the rates previously charged by NTCL. A primary cause of the proposed rate increase was the high initial debt load the company would have to assume to begin operations.

3.6.1.3 Access to Fort MacKay

- The major alternative to the route examined in this report is all-weather access from Fort Chipewyan, across the Delta area and

south to connect with Highway #63 at Fort McKay, a distance of roughly 200 km.

- In 1976, Fenco Consultants prepared a major report on the "southern alternative" for Alberta Transportation. Based on various alignment options, construction costs ranged from $55 million to $100 million in 1976 dollars.

- The most economical route, from Fort MacKay to Old Fort Point on Lake Athabasca, would not provide all-weather access. It would rely on a ferry and a winter ice bridge across Lake Athabasca. Access would not be available during freeze-up and break-up nor could the ferry operate during heavy winds.

- The potential for the Fort MacKay to Fort Chipewyan route is low at this time, given the high costs, difficult terrain and reduction in resource development activity north of Fort McMurray during the past two years.

3.6.1.4 Implications of the Two Major Alternative Routes

o The following table identifies the relative advantages and disadvantages of the two road alignments; west to Peace Point and Highway #58 and south to Highway #63.

Table 1

Summary of Advantages and Disadvantages of Route Alternatives

Alternative 1 Fort Chipewyan to Peace Point	Alternative 2 Fort Mckay to Fort Chipewyan
Advantages:	**Advantages:**
- least expensive route;	- shorter overall route to major urban centers;
- road construction distance and time of construction period shorter;	- open up new resource development areas south of Fort Chipewyan including possible forestry and oil and gas activity;
- new annual road maintenance costs less expensive; and	- best exposure and access to job opportunities for northern residents;
- offers increased opportunity for Fort Chipewyan residents to participate in the Slave River Hydro Project.	- shorter travel route for commercial and passenger traffic would produce more savings in freight and travel costs
Disadvantages:	**Disadvantages:**
- further travel distance to major urban centres;	- most expensive route;
	- longer length of actual road construction (200 km);
	- longer period of construction (5 years)

3.6.2 Interview Results

3.6.2.1 The Road and Alignment

- Generally, the residents of Fort Chipewyan support the construction of an all-weather access to Peace Point and Jean D'Or Prarie. This route was seen as more practical to build and less costly than the southern (to Fort MacKay) alternative.

- A few residents supported the southern link from Fort MacKay to Old Fort Point together with barge and ice bridge service to Fort Chipewyan. All costs aside, these residents would prefer a road reaching Fort McMurray because of wholesale outlets, government and health services, and some family ties.

- A few residents indicated that they did not support all-weather road access of any kind to Fort Chipewyan.

- Most residents indicated that the winter road to Fort Smith was well used. Generally, respondents travel on the 4-month winter road to Fort Smith an average of 5 times each.

3.6.2.2 Business and Economic Development

- The primary reasons given by most individuals in support of all-weather access was the potential for economic development and the anticipated reduction of freight costs for consumer goods.

- Some residents speculated that a few small businesses would begin as a result of a road. These developments might include a small trucking company and a barge service for other communities on Lake Athabasca. Increased business for existing firms and new tourist opportunities were also expected as a result of the proposed road.

- Residents indicated that the fishing and lumbering industries were not competitive largely because of distance and high freight rates. If freight rates were lowered it was felt these industries would become more economic. Some residents also suggested that the Rochers red granite deposits 10 km from Fort Chipewyan may become more economic to develop with all-weather access.

- Several trappers reported that a road link would not seriously affect trapping. They believed that the wildlife would generally move away from the road but this problem was offset to some extent by easier access to trapping areas.

- The Cree band reported that an additional benefit would be access to the proposed Peace Point Reserve. They further expected that Peace Point may benefit from business developments such as a gas station, restaurant, motel and tourist facilities.

3.6.2.3 Barge Service and Freight Costs

- A primary benefit mentioned by nearly all respondents was the potential reduction in the cost of consumer goods attributed to high freight costs.

- All residents were seriously concerned about the potential cessation of barge service by Northern Transportation Company Limited. Residents reported that NTCL officials expected freight costs to double if NTCL began serving Fort Chipewyan via Fort Fitzgerald. Indeed, the new carrier, A-Frame proposes a 50% increase in rates. The uncertainty of future barge service has created particular difficulties for the Cree Band's housing program. They planned to have the materials hauled in over the winter road rather than await barge service.

- Business representatives indicated that in addition to high costs of freight, they also were required to carry large inventories of bulk goods. Because of the irregularity of supply, the carrying costs of larger inventories are then reflected in higher business costs, and ultimately, higher retail prices.

- Some residents did not believe that the cost of goods would be significantly reduced even with all-weather road access. Although they stated, if a road was built, they expected people to buy bulk supplies from Fort Smith, Fort Vermilion, and High Level.

- Several residents cited the paradox that they could receive alcohol from the ALCB for the same price as Edmonton residents, but that the local price of milk was much higher because it included freight costs. Some residents used an example of high costs that had occurred at one point early in 1983 -- $100.00 for 100 lbs. of potatoes.

3.6.2.4 Social Considerations

- Generally, respondents indicated that the community was "ready" for a road and they believed most other residents supported a road.

- Some residents expected that all-weather access would bring some additional social problems such as an increase in alcohol and drug abuse. Other residents held the view that these problems were already very serious. People subscribing to this opinion felt the road would not worsen the problems.

- The Fort Chipewyan Health Centre reported that Peace Point residents could be served by the nursing station if all-weather access was provided.

- Some residents were concerned that a road would bring an increase in transients into the community and the result could be a loss of community cohesiveness. On the other hand, other respondents believed that the road would reduce the community sense of isolation.

3.6.2.5 Community Suggestions

- A number of alternative proposals were raised by various residents. These suggestions included:

  (1) A phased development on the Jean D'Or Prairie to Peace Point to Fort Chipewyan road.

  (2) A winter road to Fort McMurray involving an ice bridge across Lake Athabasca.

  (3) An examination by the Alberta Government of a food subsidy program for Fort Chipewyan.

4. PARKS CANADA

4.1 History and Description of the Park

- In 1922 a reserve for buffalo was set aside by the federal Department of Dominion Lands and Forests. This original reserve has increased in size over the years. It officially became a National Park in 1967. Wood Buffalo National Park is 44,800 sq. km along the Alberta/NWT border west of the Slave River.

- The Park is primarily known for the 5000-6000 bison within its borders, but it is also noted for other significant features as well. These features include a large boreal forest, Lac Claire, the Peace Athabasca delta, unique salt plains and an extensive gypsum karst area.

- The park is also noted as a habitat for geese, ducks and other waterfowl. It is the major nesting grounds of the Whooping Crane. Moose, deer, and fur-bearing animals also predominate within the Park.

- Presently, recreation and tourism facilities within the Park are limited. Wood Buffalo National Park is designed to ensure that its wilderness character is maintained. Only about 1300 people per year visit the Park, largely in the summer months. It is estimated that almost one-half of the Park visitors are residents of Fort Smith with the remainder coming from southern Canada, the U.S. and Europe.

- Parks Canada has indicated its intention to upgrade road corridor facilities, recreation facilities, and access to major resources; however, it is intended that these developments be compatible with the wilderness character of the Park.

- As no through roads extend across the Park area, the existing road pattern results in Wood Buffalo being a destination area for visitors.

- It is recognized in the "Wood Buffalo National Park Management Plan - Second Draft, March 1983" that certain facilities and improvements are required; however, the intent of the plan is to ensure that the wilderness characteristics of the Park are maintained. Some major proposals related to visitor services and facility developments are provided for in the draft management plan:

  (1) Development of modest unserviced campgrounds to complement existing facilities;

  (2) Construction of a number of launch ramps and provision of published river guide brochures to encourage water access; and

  (3) Development of additional guide services, tours and expeditions.

- Although the Park is basically a wilderness area, the Park is not entirely uninhabited. A small settlement at Peace Point and a larger settlement at Garden River are within its boundaries.

- Some trapping and hunting is permitted within the Park, however, it is limited to those individuals or families who hunted and trapped within the area before the Park was designated. Only resident Indians living within 50 km of Wood Buffalo National Park boundaries are allowed hunting and trapping privileges in the Park. The trapping season for furbearers is November through March and hunting for moose, bear, duck and geese extends from September to May. A limited amount of domestic fishing also

takes place in the park by resident natives. Hunting for cariboo, bison and deer is not permitted.

- Park officials do not consider poaching a serious problem at present. Evidence of an average of 10 incidents of poaching bison are found by Park Rangers annually. Poaching is a more significant problem around Fort Chipewyan primarily because it is near the winter range of approximately 1,000 bison.

4.2 Peace Point

- The Peace Point Settlement contains approximately 10 families from the Cree Band at Fort Chipewyan. Negotiations are underway to extinguish an outstanding obligation from Treaty #8. The Fort Chipewyan Cree Indian Band has selected the Peace Point site because of its historical significance and because some families have lived there for many years. The site also encompasses part of a large gypsum deposit. This deposit, although of significant size, is not thought to be economic to mine because of its distance from markets. Parks Canada policy does not permit mining within Parks.

- The Draft Management Plan states that Parks Canada accepts the right of the Band to claim an area of 43,000 acres within the Park. However, the plan also indicates that other sites would be preferable to fulfill the claim.

4.3 Garden River

- The community of Garden River is also inside the Park, on the western boundary. Unlike Peace Point, it has no formally recognized status. The draft Management Plan indicates that "ultimately it would benefit both the residents of Garden River and Parks Canada if the community could develop under its own control

and not be constrained by the National Parks Act". This could only be accomplished if the community were excised from the Park. In the consultation process to prepare the plan, Garden River residents lobbied not to be excluded from the Park. The Plan indicates that a final decision will be deferred to 1988. According to the plan," hunting and trapping privileges of the residents would continue regardless of the community's eventual status."

4.4 Timber Berth #408

- A timber agreement currently exists within Wood Buffalo National Park. The agreement, which expires in the year 2002, covers an area of 497 sq. km in the Peace River Valley adjacent to the western park boundary. The timber berth is owned and operated by Canfor Ltd. operating out of High Level. Seasonal employment is provided to local residents.

4.5 Road Development

- The Wood Buffalo Draft Management Plan contains the following statements regarding road development within the Park.

"New demands on the existing park road network reflect the growth of regional communities and the desire for increased tourist traffic. The economic benefits of better access to southern Canada for regional communities, the cost of constructing, maintaining and upgrading roads, Parks Canada policy, the desire of the public to gain easier access to Park resources, the protection of those same resources and considerations of regional transportation networks have all contributed to the definition of the recommendations proposed."

"Public comments on the proposals for existing roads generally favoured improvements. The proposal for new roads however gener-

ated both positive and negative reaction. Communities adjacent to the Park strongly favoured development of the access route while communities along the route were opposed to it. Comments from more distant centres such as Calgary and Edmonton, also rejected the proposal."

"Parks Canada will support the proposal by the Government of the Northwest Territories to hard-surface Highway 5. This will reduce the environmental impact of the existing road on Park land and improve the quality of the driving experience for regional residents and Park visitors. Design and technical assistance will be provided by Parks Canada if required. The Park will develop improved visitor and interpretive facilities along the highway which may include exhibits, trails and picnic areas."

"The Loop Road will be upgraded by Parks Canada to a reliable all-weather road. The sections of the road that have the greatest use will be upgraded first."

"The winter road through the Park to Fort Chipewyan will remain essentially unchanged. Minor improvements to the road will be undertaken as required."

"Parks Canada would support a proposal by the Government of Alberta to relocate the winter road to the east side of the Slave River. Parks Canada would construct and maintain a connecting road from the existing Loop Road to the Slave River just north of the Peace River to facilitate the relocation of the winter road. If Alberta were to provide all-weather access to Fort Chipewyan from Fort Smith, Parks Canada would support that proposal in principle, recognizing that the existing section of winter road south of the Peace River could not provide a base for an all-weather road and that an access road on the east side of the Slave River would require a ferry service."

"Parks Canada accepts in principle, the construction of a road linking Alberta Highway 58 to Peace Point in view of its potential importance as a component of the regional transportation network. The impact of the road on the community of Garden Creek will be an important factor in Parks Canada decision to permit the road to be constructed. Parks Canada will not participate financially in the construction or future maintenance of the road, but may provide funds for design assistance and visitor use requirements in the travel corridor."

- Park officials report that the policy for road development is similar to the approach taken in other national parks. Basically, Parks Canada will not restrain development for roadway of regional consequence but neither will they pay for roads that are of no specific value to them. It is their position that they do not require further road development within the Park.

- One disadvantage of the road according to Park officials would be the need for a Ranger Station located at the western boundary of the Park. Costs associated with the ranger station were estimated to be $250,000 capital construction and $150,000 annual operating and maintenance costs annually.

- Another concern raised by Park officials was the potential for poaching within the Park and the increased possibility for road accidents involving buffalo.

- If a road were to be built, an environmental assessment under the terms of the Environmental Assessment Review Process (EARP) would be necessary. The process requires that a proponent of the road propose the project before an E.A.R.P. be carried out. The major steps of this process are a screening or a review carried out in the early stages of planning to review existing documentation.

This step is followed by an Initial Environmental Evaluation which is an assessment of the nature and scope of the environmental effects. Finally a Panel may be struck and a hearing process undertaken leading to a decision.

- The costs of compiling the preliminary screening reports and Initial Environmental Evaluations are expected to be paid by, or recovered from, the proponent of the project. Parks Canada may require that a full scale hearing process be held to examine the road proposal. This process may take as long as 3-4 years because much of the data on the environmental impacts of the road are not known.

5. THE NORTHWEST TERRITORIES GOVERNMENT

5.1 Overview

- The Government of the Northwest Territories supports the construction of the road between Fort Smith and Highway# 58. The major advantages are seen to be increased tourism and overall regional development.

- Some budget saving may accrue to the Territorial Government by way of reduced freight rates for goods received from Edmonton. Secondly, government staff time for travel to southern centres would also be reduced.

- The construction of the road may have some training and construction employment benefits to the Territories and the Tebacha College in particular.

- There would likely be some benefits to the Territories if heavy loads and subsequent deterioration of Highway 5 can be averted, particularly if the Slave River Hydro Project were to proceed.

5.2 Highway #5

- Highway #5 extends from the Mackenzie Highway at a point just south of Hay River, and southeast to Fort Smith for a distance of 265 km. About 65 km has a chipped seal surface while the remainder is surfaced with crushed gravel.

5.3 Resource Development Policy

- The Government of the Northwest Territories has a well defined resource development policy. The policy is based on the following principles:

A. Opportunities for jobs, training, and business development shall be maximized to ensure economic benefits.

B. The NWT shall derive energy benefits and secure energy supply from energy producing projects to help offset the loss of resources and to contribute to achieving energy self-sufficiency.

C. The environment and renewable resource activities shall be protected.

D. Northern lifestyles and cultural heritage will be protected.

E. Local communities and interest groups will participate in consultation programs to ensure that resource projects are responsive to public concerns.

F. The interests of native groups shall be recognized.

G. Social and economic disruption shall be identified and monitored, and corrective measures developed and assigned to industry and appropriate levels of government.

H. Expansion of existing communities to support resource development shall occur in an orderly manner in keeping with the wishes of residents, and when this expansion is uneconomic or undesirable, new single-resource communities may be established.

I. An equitable share of resource revenues should accrue to the NWT.

- Under item G above, the NWT government may require that the Slave River Hydro Project pay costs associated with damage caused by heavy loads on Highway #5.

6. SLAVE RIVER HYDRO PROJECT

6.1 Introduction

- The Slave River Hyrdo-Electric Project is the most significant economic development project proposed in the region served by the Highway #58 extension proposal. The preferred dam site has not been selected; however, there are three possible locations being considered within a 30 kilometer stretch of the Slave River south of Fort Smith, N.W.T. Two of the three alternative sites are located in Alberta.

- It has been estimated that the hydro project and associated transmission facilities will cost in the order of $2.0 to $2.2 billion in mid-1980 prices. These cost estimates do not include interest charges during construction nor future price escalation. Assuming that construction commences over the next decade, the "as built" cost could total $8.0 billion.

- The proposed hydro development would involve the installation of between 1700 and 2000 megawatts of electricity generating capacity and require approximately nine years to construct.

- The total manpower requirements would be substantial, with the construction of the project generating a net increase in direct employment of roughly 7000 man-years. A large portion of the labour requirements will necessarily be met by manpower originating from outside the region. Except for locally available sand, gravel, and rock supplies, almost all of the materials and equipment (e.g., cement, fuel, steel, turbines, etc.) for the dam construction will be procured from outside the region.

- The extension of Highway #58 will provide a shorter, alternate transportation route to the hydro project and is expected to pro-

vide savings in terms of lower transportation costs and travel times. The following section of this report examines these potential benefits to the Slave River project.

6.2 Construction Phase

- The most significant impact of the road extension will occur during the construction phase of the dam, when large movements of men, material, and equipment are required.

- The two main components of the project include:

  - the dam and related generating facilities;
  - the transmission lines and sub-stations.

- Various background reports have developed the following preliminary estimates of material and equipment requirements for the project:

Table 2

Estimated Amounts of Material and Equipment for the Slave River Hydro Electric Project

Commodity	Metric Tonnage
Cement	320,000
Fuel	130,000
Steel/lumber	67,000
Other [1]	90,000
Total	607,000

[1] Food, equipment, dypronite and unidentified materials

- These estimates include only those materials originating from outside the region and which potentially would benefit from improved transportation alternatives. The figures do not include construction equipment required at the dam nor the materials and equipment associated with construction of transmission facilities.

- It has been estimated that in excess of 11,000 truckloads of material and equipment will be delivered to the project site over the entire construction period, with about 80% of these movements concentrated over a three-year time frame.

- The delivery of materials and equipment by air is likely to be relatively limited, except in relation to perishable supplies, small, high-value parts, and urgently required items.

- Another alternative route for transport is via Fort McMurray, using a combination of rail or road and barge access. Ground transportation north of Fort McKay is poor and restricted to the winter period. Barge service along the Slave River is provided during the summer months and is likely to be used for the transport of transmission line materials and equipment because of the proximity of the proposed utility line right-of-way to the Athabasca and Slave Rivers. For most commodities, however, the Fort McMurray route is unlikely to be practical, because of scheduling difficulties and the necessity for inter-modal transhipment and warehousing and storage.

- The analysis of potential transportation savings is concentrated on a comparison of the proposed Highway #58 extension with the alternative route to Fort Smith via Highway #5 in the Northwest Territories. Both routes can imply all-truck or truck-rail traffic combinations.

- Estimated potential costs of moving the proposed commodity tonnage on the two routes, have been examined with regard to:

  i) differences in distances and road standards;
  ii) vehicle operating costs; and
  iii) existing rail and trucking rates, where relevant.

  (See Appendix A - Estimated Transport Costs for Detailed Calculations and Assumptions Used in this Section)

- Based on alternate assumptions regarding transportation rates and costs, the Highway #58 extension implies an overall saving, compared to the N.W.T. route, of approximately $8.50 to $12.50 per metric ton shipped. Assuming that the proposed highway extension captured 50,000 tons, or 80% of the available traffic, the total savings to the Slave River Project would amount to roughly $4.3 to $6.3 million in 1983 dollars. These savings are equal to about 7% to 10% of the total truck transportation costs estimated for the hydro project.

- The projected savings are principally due to lower variable operating costs (i.e., fuel, repairs, tires, driver costs, etc.) related to the round trip distance savings of about 314 kilometers from Edmonton to Fort Smith via Highway #58.

- Over time Highway #67 may be upgraded and improved. Greater usage of Highway #67 would increase the benefits of using the Highway #58 extension to Fort Smith versus Highway #5 in the N.W.T. It is estimated that additional cost savings could amount to roughly $6 per ton or as much as $3 million over the project construction phase.

- The movement of materials and equipment via any road route to the Slave River site will induce increased government road maintenance and repair costs. These additional costs are difficult to quant-

ify; however, discussions with Alberta Transportation officials indicated the following:

- although annual maintenance and operating costs will increase, the amount is not expected to be significant;
- depending on the road standard, increased capital costs on gravel portions of the highway should not be significant;
- the life expectancy of the paved Highway #38 north of High Level may be reduced by roughly 15% to 20%.

o As indicated in Chapter 5 the Government of the N.W.T. has a policy concerning resource development that essentially asks the proponent to pay for any damages to roads caused by the development. With regard to the movement of materials and equipment to the Slave River Hydro-Electric Project during the construction phase, additional capital costs that may be attributed to a shortened life expectancy of the paved road portion through the Northwest Territories are estimated to be between $1.3 and $2.1 million.

o The road extension project will also reduce the transport costs of private passenger vehicles. It is estimated that 50,000 round trip personnel movements can be expected during the construction phase. Clearly, many of the construction workers will originate from outside the region and will utilize air services for interregional travel. Assuming, however, that 10% of the personnel movements are by private vehicle, carrying an average of two persons, the vehicle savings in operating costs through the use of Highway #58 would amount to roughly $0.1 million. Valued at $7 per hour, the time savings to passengers would amount to a further $0.1 million.

- The proposed road extension access will benefit existing northern Alberta residents and businesses during the construction phase by:

  1. Enhancing opportunities for northern participation in construction activities and the supply of goods and services through improved access; and

  2. Reducing vehicle and time costs for northern residents and contractors.

6.3 Construction of Transmission Facilities

- The proposed transmission system consists of twin 500 K.V. lines extending from the dam site through Fort McMurray to an interconnect point at Fort Saskatchewan. Six sub-stations will also be located along the 750 kilometer route.

- The transmission line right-of-way is not expected to parallel the proposed Highway #58 extension route. Materials will be distributed by barge along the Athabasca River and trucks via existing roads, upgraded trails, and limited new road construction. Highway #58 is unlikely to be used for transmission line construction activities to any significant degree.

- However, depending upon the route selected for the transmission line, the proposed Fort Chipewyan connector road on the east side of the Slave River may benefit the project. It might avoid the need to build a 16 kilometer all-weather road linking Fort Chipewyan to an intermediate sub-station. The possible savings to the hydro project are estimated to be as much as $3.5 million.

6.4 Operating Phase

- It has been estimated that roughly 60 full-time powerhouse and dam staff will be required during the operating phase of the project.

- The re-supply of various goods, materials and equipment to the dam site will involve relatively modest tonnages. The total transportation costs for the dam are estimated to be about $90,000 annually. The Highway #58 extension project might reduce those costs by as much as 10% but the absolute significance of these savings is small.

7. CONCLUSIONS

- This review indicates that the extension of Highway #58 to Fort Smith and a connection to Fort Chipewyan is strongly supported by the majority of residents in the region.

- With the exception of Garden River residents, communities in the region expect to benefit from increased economic activity and by virtue of de-isolation and easier access to the south.

- An increase in tourism in the region is anticipated as a result of the creation of a "circle tour" and improved access to Wood Buffalo National Park.

- With the uncertainty of barge tariff, Fort Chipewyan residents are very concerned about the high cost of freight to their community.

- The proposed road developments would have a beneficial impact on the proposed Slave River Hydro-Electric Project.

- If the Highway #58 extension was to be built, the concerns of Garden River regarding the status of the community, their hunting, fishing and trapping rights, and the route of the road near their community should be resolved.

- Overall, the traditional occupations of hunting, fishing and trapping will not be seriously affected by the development of roads within the region.

- The first step in initiating the proposed road project would involve discussions between the Alberta Government, the Government of the Northwest Territories and the Federal Government.

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9.2 Community Contacts

Fort Chipewyan

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Fort Smith

Town Personnel:
John Vogt - Mayor
Councillors: Kennedy
Thompson
Seiffert
Robinson
Berger
Town Administrator
Public Works Manager

Gary Bohnet
Al Bourque
Don Boxer
Ken East
Hugh Ferguson
Jim Green
Len Heron
Wes Heron
Ken Hudson
Charles Kennedy
John Manton
Cathy McDonald
Danny McDonald
Glen McLean
Nick Mercerdi
Leon Peterson
Jack Poitras
Eddy Powder
John Price
Bob Redhead
Tracey Schumann
Bob Snider
Mike Stillwell
Garth Sherwood
Jacque Van Pelt
John Vogt (Mayor)
Bill Van Linbeck
Terry Ward

Fort Vermilion

Bob Gainer
Ron Henriette
Stella McRoberts
Bayne Murray
Stan Smith
Ray Toews

High Level

Ivan Brewster
Brian Carnell
John Clark
Brian Donavan
Terry Freeman
Jack Hoster
Ruth Lindsay
Barbara Love
Clyde Norman
Sheila Paulson
Jim Sawchuk
Gary Stone
Richard Turcotte
Bob Walters

Peace Point

Jim Kaskamin
Joe Vermilion

Garden River

Meeting held with 11 residents, Chief, Councillor, and Band Manager from Little Red River

A P P E N D I X A

ESTIMATED TRANSPORT COSTS

Tables 1 and 2 estimate transportation costs for selected commodity types on alternative routes to Fort Smith. The commodities shown in Tables 1 and 2, cement, fuel and food, comprise approximately 80% of the expected volume of shipments required to construct the dam.

The calculated transport costs should be considered only broad estimates and relevant primarily in terms of assessing the relative costs of alternative routes. The table below summarizes Tables 1 and 2 and shows the relative cost of shipping the three selected commodities on the alternative routes to Fort Smith.

	COMMODITY		
	Cement	Fuel	Food
	($ per metric tonne)		
I. VIA HAY RIVER			
• Combined Rail and Road:			
-method one	$109.78	$62.70	$123.51
-method two	$111.34	$57.38	$113.56
• All Road			
-method one	$93.54	$93.54	$173.08
-method two	101.36	75.20	111.50
II. VIA HIGH LEVEL AND HIGHWAY #58			
• Combined Rail and Road			
-method 1	$106.73	$62.29	$128.95
-method 2	$106.56	$53.22	$109.82
• All Road			
-method 1	$84.94	$84.94	$139.00
-method 2	$86.24	$63.98	$94.96

Certain materials and equipment required for construction of the hydro project were assumed to originate

from, or be shipped through centres other than Edmonton, and alternative route transport costs have been estimated for these commodities as well. The total transport costs for all commodities shipped have been estimated for the various route alternatives. The average per tonne costs have been determined based on these estimated costs and are given below:

COMPARATIVE ROUTE
TRANSPORTATION COST OF COMMODITIES[a]

Method	ROUTE ALTERNATIVE TO FORT SMITH ($/metric tonne)			
	Rail to Hay River/Road to Fort Smith	All Road Via Hay River[b]	Rail to High Level/Road to Fort Smith	All Road Via High Level & Highway #58[b]
1[c]	$111.50	$110.00	$109.00	$101.50
2[d]	$111.00	$108.50	$106.00	$96.00

a Commodities include: Cement, Fuel, Food, Dypronite and Unidentified materials from Edmonton, Turbines, Generators, and other equipment from Toronto; steel from Hamilton; lumber from High Level; and plywood from Grande Prairie.

b Assumes turbines, generators, steel, and other equipment from eastern Canada shipped via rail to Hay River and road to Fort Smith.

c Derived from, "Operating Costs of Trucks in Canada - 1982" prepared for Transport Canada by Trimac Consulting Services Ltd. July 1982. The figures provided in that document are not commodity specific but apply to broad vehicle configurations. Cement and fuel costs are based on seven-axle semi-trailer with pup travelling 160,000 km annually; food transport costs are based on 5-axle semi-trailer units travelling 240,000 km annually. Vehicle operating costs have been adjusted to reflect different road conditions (ie. paved vs. gravel) along the various routes.

d Estimated current transport costs provided by Trimac.

Comparing the all-road alternatives under the two methods, it is estimated the transport cost savings would be roughly $8.50 to $12.50 per metric tonne shipped.

TABLE 1
ESTIMATED TRANSPORTATION COSTS OF SELECTED COMMODITIES: EDMONTON TO FORT SMITH VIA HAY RIVER[a]

	COMMODITY		
	Cement	Fuel	Food
	($ per metric tonne)		
I. TRANSPORT MODE: COMBINED RAIL AND ROAD			
Rail Costs[b]			
• Estimated rail tariff	$89.10	$42.02	$89.10
Road Costs			
• Method 1:[c]			
- Driver Costs	$4.55	$4.55	$11.01
- Fuel Costs	$2.90	$2.90	$4.13
- Other Vehicle Operating Costs	$13.23	$13.23	$19.27
Road Cost	$20.68	$20.68	$34.41
• Method 2:[d]	$22.24	$15.36	$24.46
Total Costs			
• Method 1	$109.78	$62.70	$123.51
• Method 2	$111.34	$57.38	$113.56
II. TRANSPORT MODE: ALL ROAD[a]			
Road Costs			
• Method 1:[c]			
- Driver Costs	$20.58	$20.58	$55.39
- Fuel Costs	$13.10	$13.10	$20.77
- Other Vehicle Operating Costs	$59.86	$59.86	$96.92
Road Cost	$93.54	$93.54	$173.08
• Method 2:[d]	$101.36	$75.20	$111.50

a Total route distance - Edmonton to Fort Smith via Hay River, 1371 kilometers.

b Provided by Alberta Economic Development.

c Derived from, "Operating Costs of Trucks in Canada - 1982" prepared for Transport Canada by Trimac Consulting Services Ltd. July 1982. The figures provided in that document are not commodity specific but apply to broad vehicle configurations. Cement and fuel costs are based on seven-axle semi-trailer with pup travelling 160,000 km annually; food transport costs are based on 5-axle semi-

trailer units travelling 240,000 km annually. Vehicle operating costs have been adjusted to reflect different road conditions (ie. paved vs. gravel) along the various routes.

d Estimated current transport costs provided by Trimac.

TABLE 2

ESTIMATED TRANSPORTATION COSTS OF
SELECTED COMMODITIES: EDMONTON TO FORT SMITH
VIA HIGH LEVEL AND PROPOSED HIGHWAY #58 EXTENSION[a]

	COMMODITY		
	Cement	Fuel	Food
	($ per metric tonne)		
I. TRANSPORT MODE: COMBINED RAIL AND ROAD			
Rail Costs[b]			
• Estimated rail tariff	$73.92	$29.48	$73.92
Road Costs			
• Method 1:[c]			
- Driver Costs	$7.22	$7.22	$17.61
- Fuel Costs	$4.59	$4.59	$6.60
- Other Vehicle Operating Costs	$21.00	$21.00	$30.82
Road Cost	$32.81	$32.81	$55.03
• Method 2:[d]	$32.64	$23.74	$35.90
Total Costs			
• Method 1	$106.74	$62.29	$128.95
• Method 2	$106.56	$53.22	$109.82
II. TRANSPORT MODE: ALL ROAD			
Road Costs			
• Method 1:[c]			
- Driver Costs	$18.69	$18.69	$44.48
- Fuel Costs	$11.89	$11.89	$16.68
- Other Vehicle Operating Costs	$54.36	$54.36	$77.84
Road Cost	$84.94	$84.94	$139.00
• Method 2:[d]	$86.24	$62.98	$94.96

a Total route distance - Edmonton to Fort Smith via High Level and proposed Highway #58 extension, 1214 kilometers.

b Provided by Alberta Economic Development.

c Derived from, "Operating Costs of Trucks in Canada - 1982" prepared for Transport Canada by Trimac Consulting Services Ltd. July 1982. The figures provided in that document are not commodity specific but apply to broad vehicle configurations. Cement and fuel costs are based on seven-axle semi-trailer with pup travelling 160,000 km

annually; food transport costs are based on 5-axle semi-trailer units travelling 240,000 km annually. Vehicle operating costs have been adjusted to reflect different road conditions (ie. paved vs. gravel) along the various routes.

d Estimated current transport costs provided by Trimac.